

Physician associates in England's hospitals

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Full Title

**Physician Associates in England's hospitals: a survey of medical directors exploring
current usage and supporting/inhibiting factors to their recruitment**

Short title: Physician Associates: hospital medical director survey

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Conflicts of interests

SdeL is Head of Department of Clinical and Experimental Medicine; one of the Sections of this Department – Medical Education is to launch a physician associate course autumn 2016.

JP chairs the UK and Ireland Board for Physician Associate Education and is director of the Physician Associate programme at the University of Birmingham.

Author contributions

VMD, MH, JP, SdeL, JG, RG, HG and JE conceived and were awarded funding for the study; VMD, MH, JP, CW designed the data collection tool; CW and MH collated and analysed the data; CW, MH, VMD, JP, SdeL, RG, JG, HG interpreted the data; CW wrote the first draft of the manuscript; all authors critically revised the manuscript and agreed the final version.

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The views and opinions expressed herein are those of the authors and do not necessarily reflect those of the HS&DR Programme, NIHR, NHS or the Department of Health.

Full Title

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Abstract

In the UK secondary care setting the case for physician associates is based on the cover and stability they might offer to medical teams. We assessed the extent of their adoption and deployment, that is, their current usage, and the factors supporting or inhibiting their inclusion in medical teams using an electronic, self-report survey of

medical directors of acute and mental health NHS trusts in England. Physician associates, employed in small numbers, in a range of specialties, in each of 20 employing trusts and not yet employed in the other 51 responding trusts, were reported to have been employed to fill gaps in medical staffing and supporting medical specialty trainees. Inhibiting factors were commonly a shortage of physician associates to recruit and lack of authority to prescribe, as well as a lack of evidence and colleague resistance. Our data suggest there is an appetite for employment of physician associates while practical and attitudinal barriers are yet to be fully overcome.

Key words: Physician Assistant, physician associate, Physician Executives, medical directors, Secondary Care Centers

INTRODUCTION

Internationally, policy makers propose that new health and care roles should be developed to ensure a more flexible workforce to meet fiscal and quality issues.^{1,2} Expanding the non-medical workforce is considered to offer opportunities to achieve this, including through the physician associate role.³ The physician associate role (known as physician assistant outside of the United Kingdom [UK]) has a fifty year history in the United States of America (USA), where the Affordable Care Act is likely to see further expansion of numbers employed.⁴ In the UK the role is relatively new and numbers remain small, with approximately 220 on the UK Physician Associate Voluntary Managed Register.⁵ Physician associates undertake a postgraduate qualification and are employed as mid-level practitioners within medical and surgical teams. In the UK they cannot prescribe medicines or order ionising radiation as they are not currently included within the health professions' regulatory processes. The role has received increasing attention as a potential growth area from UK government particularly in primary care,⁶ where there is evidence that physician associates can be complementary to general practitioner and nursing roles, albeit with limitations due to not having prescribing rights in the UK.⁷ In the USA 68% of physician assistants work in

specialty practice,⁸ with decreasing proportions working in primary care.⁹ Similarly in the UK they report working in a range of adult and paediatric specialties.¹⁰

General practitioners (GPs) employing physician associates in the UK reported the factors motivating employment as government access time targets, increased patient demand, medical recruitment problems and cost effectiveness. These GPs also noted challenges to employment including the lack of prescribing rights and regulatory framework.¹¹ Crossing both primary and secondary care, doctors who work with physician associates on a regular basis are reported to be pleased with the role, again limited by regulatory issues.¹²

In the UK secondary care setting the case for the employment of physician associates is made on the stability they might offer to medical teams and their broad medical knowledge in the face of hyperspecialisation.¹³ However we have found no published empirical evidence on the opinions of senior medical staff on employing physician associates in this setting.

As part of an ongoing study investigating the contribution of physician associates to secondary care in England,¹⁴ we aimed to assess the extent of their adoption and deployment, that is, their current usage in secondary care and the factors supporting or inhibiting their inclusion as part of medical teams. Within the NHS, medical directors are board-level managers who provide strategic direction for clinical practice¹⁵ who have

been described as providing a critical role, where clinical and financial governance meet.¹⁶ They were therefore considered the appropriate group to address our aim.

METHODS

Design

We conducted a cross sectional study, using a structured, self-report survey. The survey was designed for purpose by the research team with expertise in workforce development, physician associates, medical education, NHS medical strategy, health economics, medical sociology and research methods. The survey was being tested by a senior clinician (JP) and piloted by one medical director. Further minor changes were made following these preparatory stages.

Setting, participants and study size

The sample was comprised of the medical directors of all acute and mental health NHS trusts in England, as listed on NHS Choices (the NHS information portal) at December 2015 (n=214) <http://www.nhs.uk/service directories/pages/nhstrustlisting.aspx>).

Medical directors' contact details were identified predominantly from the Binley's Database of Hospital Doctors 2015 (assistant/associate/medical director)

(<http://www.binleys.com/ProductGroup/Databases/>), or by telephone request to specific trusts.

The survey was administered electronically, using Survey Monkey (Survey Monkey, Palo Alto, CA, USA), and returned anonymously.

Consent was implied by return of a completed survey.

Variables, data sources and measurement

The survey consisted of 11 questions, 10 having closed single or multiple response options with an opportunity for open comment, and one an open response question.

Six questions addressed the trusts' employment and deployment of physician associates, including the clinical specialties in which physician associates were employed;¹⁷ four questions considered inhibiting and facilitating factors to the employment of physician associates, and one allowed for respondents to volunteer any additional information.

An email invitation containing a participant information sheet and a hyperlink to the survey was sent to those medical directors already known to research team members in December 2015, and to all others in January 2016. Two reminders were sent to all, therefore including some who had already responded, in February and March 2016.

Analytical methods

Survey responses were imported from Survey Monkey into SPSS (v23, IBM, UK).

Closed response questions were analysed quantitatively using descriptive statistics of response frequencies. Open responses were analysed qualitatively by two of the authors (MH and CW), grouping them thematically, with respondents' verbatim comments,¹⁸ where they did not duplicate responses in the closed response options.

The study was approved by the Faculty of Health, Social Care and Education of Kingston University and St George's, University of London research ethics committee (15-08-2015).

RESULTS

Of the 214 medical directors contacted, 71 responded with a fully completed survey (response rate 33%).

Respondents were mainly from acute trusts (n=48, 68% of respondents, 31% of English acute trusts), followed by mental health trusts (n=13, 18% of respondents, 22% of English mental health trusts), trusts with combined responsibilities (n=7, included in our acute or mental health trust lists) and three from specialist trusts, included in our acute trust listing. Twenty (29%) respondents were from a trust already employing

physician associates; 19 being acute and one a mental health trust). Of the remaining 51, 44 (86%) stated that their trust was considering employing PAs (27 acute, nine mental health and eight combined or specialist trusts).

Adoption and deployment of physician associates

Within the 20 respondent trusts employing physician associates, most employed five or fewer (Table 1). They were reported to be employed in a wide range of specialties (Table 2).

**Table 1 Number of physician associates employed per NHS trust, as reported by
medical directors**

Numbers of physician associates employed per trust	Number of respondents
1	8
2-5	8
6-10	1
>10	3

Table 2 Employment of physician associates by specialty as reported by medical directors

Specialty area¹⁷	Specialties in which PAs are employed	Number of trusts with PAs
Anaesthesia	Anaesthetics	2
Emergency Medicine	Emergency medicine	5
Paediatrics and Child Health	General paediatrics	1
	Paediatric ENT	1
Medicine	Acute internal medicine	4
	Acute medicine	7
	General acute	2
	Stroke medicine	2
	Cardiology	3
	General medicine	2
	Gastroenterology	1
	Elderly care / geriatric medicine	2
	Neurology	1
	Rehabilitation	2
	Respiratory medicine	1

Psychiatry	General psychiatry	1
Surgery	General surgery	1
	Paediatric surgery	1
	Paediatric plastic surgery	1
	Paediatric liver surgery	1
	Trauma and orthopaedic surgery	6
	Vascular surgery	1

Of the trusts reporting more than one physician associate, six had all in one specialty (acute medicine, acute internal medicine, cardiology, anaesthetics or trauma and orthopaedics). The remaining trusts reported physician associates in a number of specialties, for example emergency medicine, general acute, acute medicine, general internal medicine, anaesthesiology, general surgery and vascular surgery in one trust. Clinical supervision was reported as being provided by a consultant in all 20 of the employing trusts, although specialist registrars (n=2 respondents) and foundation year 1 (n=1 respondent) were also listed as supervisors, and one respondent stated all grades of doctor “.....but overall consultant” (Respondent ID 10).

Factors supporting or inhibiting the inclusion of PAs as part of hospital medical team

Most respondents who were already employing or considering employing PAs selected both supporting and inhibiting factors for their employment; those not considering employment reported inhibiting factors more frequently. Thirty-three of the total 71 participants provided additional comments.

Supporting factors

The most commonly selected motivators for employment of physician associates were those related to filling gaps in medical staffing and supporting medical specialty trainees. Also, within the trusts employing physician associates, expansion of their employment was attributed to positive experience (n=8). The full list of supporting reasons selected, split by those currently employing, considering employing and not considering employing is given in table 3. The free text responses associated with this question mainly provided greater insight into the tabulated categories in particular positive experience:

“We took PAs [*physician associates*] as an experiment and were delighted”

(Respondent ID 02)

Table 3: Supporting factors for the employment of physician associates as reported by medical directors

Factor influencing physician associate employment/motivating factor for physician associate employment	Number of respondents by physician associate employing category: n (%)		
	Employing (n=20)	Considering (n=44)	Not considering (n=7)
Shortage of medical staff to recruit	17 (85)	32 (73)	0
To improve work flow and continuity in medical/consultant teams	14 (70)	35 (80)	0
To help address the management of junior doctor working hours to be compliant with the EU working time directive	14 (70)	27 (61)	1 (14)

Piloting to see whether PAs make an efficient/effective contribution to the consultant medical team	10 (50)	n/a	n/a
To support the medical team so that specialty registrars are able to meet the required training standards	8 (40)	26 (59)	1 (14)
Having successfully employed one or more PAs, other consultants requested PAs as part of their team	7 (35)	n/a	n/a
To reduce staff costs	5 (25)	8 (18)	0
Other	1 (5)	5 (11)	3 (43)
None	0	2 (5)	0

“I would say we want to evaluate the effectiveness of PAs and the contribution they make to medical/surgical and multidisciplinary teams.” (Respondent ID 36)

Seventeen of the employing trust respondents selected multiple responses, with one selecting all seven motivating factors, three selecting five or six factors, and four selecting three or four factors.

Of those considering employing physician associates the motivating factors were similar, although three also stated that they were considering physician associates as part of an overall service redesign:

“Fits with our care model aiming for more generalist approach”
(Respondent ID 16)

Additionally, one medical director from a mental health trust employing physician associates reported the following motivator:

“To support the physical healthcare monitoring and delivery to those with serious mental disorder.” (Respondent ID 48)

Responses from within both the employing and considering employing groups also formed a theme around strategies to enable the expansion of the physician associate role or numbers, including linking physician associates, their training programmes and future employers, for example through sponsorship learning from trainee physician associates, and hoping to employ them once graduated:

“To meet the competing demands of financial constraints, shortages in medical and nursing workforce and an aging population, the trust has recognised the need to recruit, train, and most importantly retain a body of physician associates. The appointment of a lead physician associate as well as formalising professional accountability ensures this group is recognised as professionals and indeed an important part of the workforce.” (Respondent ID 50)

“We are keen to expand our PA numbers and therefore are part of the NPAEP [National Physician Associate Expansion Programme (NPAEP)^{19]} and are working with HEE to host PA trainees. Having seen the value of PAs in the USA we must develop this workforce in the UK.” (Respondent ID 21)

Inhibiting factors

Inhibiting factors were also selected by all respondents although, as we would expect, these reasons were stated most frequently by those not considering employment; see table 4.

Additional comments replicated the prompted responses, with the lack of regulation and prescribing for PAs being stressed repeatedly.

“the issue of prescribing must be addressed. PAs can prescribe but aren’t allowed to. This is something that makes me incredibly uncomfortable.”

(Respondent ID 21)

The availability of physician associates was also mentioned repeatedly:

“We intend to use PAs [*physician associates*] going forward. The problem is that many acute trusts will be competing for the small number who are either just completing training or are in the process of training.” (Respondent ID 23)

Of those employing physician associates, most however also reported that factors had been raised against their employment, with most referring to more than one issue.

These included colleague resistance:

“several senior colleagues very sceptical”. (Respondent ID 44)

A potential limitation of the physician associate role was also highlighted – concern regarding the lack of career progression for PAs.

Of the 20 respondents from PA-employing Trusts, seven also reported that there were specialties/consultants that, having employed a physician associate who subsequently left the department, had not replaced the position. All but one of these reported this as attributable to either unsuccessful recruitment of another physician associate (n=3) or financial constraints (n=4). Only one reported this more negatively (the medical consultant considered another doctor to be more efficient and effective than a PA in that team).

Table 4: Inhibiting factors for the employment of physician associates, as reported by medical directors

Factor influencing decisions around physician associate employment/inhibiting factor for physician associate employment	Number of respondents by physician associate employing category: n (%)		
	Employing (n=20)	Considering (n=44)	Not considering (n=7)
A lack of authority to prescribe medication	11 (55)	18 (41)	3 (43)
A lack of physician associates to recruit	7 (35)	23 (52)	4 (57)
A lack of evidence as to whether physician associates are effective, safe and efficient in a medical team	4 (20)	11 (25)	4 (57)
A lack of authority to order radiographs	4 (20)	10 (23)	3 (43)

Opposition from other groups	4 (20)	3 (7)	1 (14)
Local negative experience	3 (15)	2 (5)	1 (14)
Other inhibiting factors (see narrative below)	6 (30)	0	0
None of the above	5 (25)	0	0

Those considering employing physician associates also included specific comments on the specialist training required for a specialist trust and physician associates being expensive. The small number of respondents not considering employing physician associates offered a slightly different perspective, suggesting that other professionals - either nurses or doctors - were better placed to meet their trust's employment needs:

“Decided not to as junior doctors (trust grades) less expensive and more useful.” (Respondent ID 02)

“I can't think of anything they could usefully do in my Trust that I can't get done better and often cheaper by a nurse, pharmacist, therapist or biomedical scientist.” (Respondent ID 58)

DISCUSSION

Main findings

We describe the current usage of physician associates in a small number of England's hospitals and medical directors' views on the employment of these physician associates. We see small numbers within individual trusts, spread amongst a range of

specialties. Our respondents support for the employment of physician associates in secondary care was high, often with multiple workforce drivers for that, in the face of medical workforce undersupply or working hours' reductions. Supporting factors were also experiential, with positive experience of working with physician associates being associated with a desire to expand that workforce. Inhibitors to the employment of physician associates were a common experience which either limited the scope of practice of those already employed, served as caution to expansion. The absence of a regulatory framework and prescribing rights were the most prevalent reasons selected, alongside an absence of physician associates to recruit. A small number of respondents reported that other roles would be better suited to meeting their workforce difficulties and that resistance to the new role was apparent.

Limitations

Our survey presents a snapshot in time in a rapidly changing employment context for physician associates in the UK, but offers previously unreported viewpoints of those in strategic medical roles in NHS employing organisations, from within trusts which have been early innovators in PA employment as well as those which were not. Our response rate is relatively low. In 2012, 19 trusts were reported to be employing PAs,¹³ suggesting our response of 20 currently employing trusts may be reasonable, although

numbers have increased since. Nevertheless, response rates to other surveys of medical directors have been similar, for example one by Monitor (part of NHS Improvement) described their response rate of 40% as 'unusually high'.¹⁶ We also conducted this survey over a period that included the UK junior doctor strike, a time of additional focus, some negative, on hospital medical teams.²⁰ Our data are skewed towards trusts either employing or interested in employing PAs, and to England, limiting generalisability.

Findings in the context of other literature

In context of literature about inhibiting and motivating factors amongst GPs in England,¹¹ our finding that it is practical issues associated with maintaining and training a medical workforce that provide most support for employing physician associates is unsurprising. The issues of regulation and prescribing are also universally reported in empirical reports,^{11,12} and commentary.^{3,13} In the USA we also see that the most commonly reported reason for employing advanced practice providers (nurse practitioners and physician assistants) was to substitute for residents in the face of medical staffing shortages.²¹

Implications

The number of physician associate graduates in England is set to expand rapidly.²² Our findings suggest an appetite for employment of these graduates, particularly in trusts who reported undersupply of physician associates as an issue. However, our findings also suggest that there is work to be done to overcome the other practical inhibiting factors. A parliamentary Health Select Committee report has recommended that physician associates should be included in state regulatory processes as a matter of urgency.²³ However, this will not address all issues raised by our respondents, such as career progression or inhibiting attitudes. The introduction of other new and redesigned roles in England has required support from regulatory/professional bodies, detailed planning and role definition, alongside change management capability – ‘redesign is not a quick fix’.²⁴

CONCLUDING REMARKS

In view of the currently limited empirical data regarding physician associates in England, alongside challenges associated with workforce redesign, the supporting and inhibiting factors to their employment reported by our medical director respondents highlight where there is work to be done to support desired physician associate employment and to address concerns of those currently indifferent or opposed to the role. Our investigation of the contribution of physician associates to secondary care in

England from multiple stakeholder perspectives, including patients, with more detailed economic analysis is due to report at the end of 2017.

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